

the time trade-off method. **RESULTS:** The sample (N=100) demographics were representative of the general population of France by age, gender and education level. The stable HS had a utility value of 0.95. The disutility of the CNS side effects ranged from -0.09 (abnormal dreams) to -0.62 (suicidal thoughts) from the stable state. The disutility values for the other side effects were: -0.11 (headaches), -0.12 (attention difficulties, insomnia), -0.18 (somnolence), -0.19 (dizziness), -0.25 (balance and coordination problems) and -0.37 (anxiety and depression). **CONCLUSIONS:** The results suggest CNS side effects cause significant burden and impact on HRQL. Society places particular value in avoiding AEs such as suicidal thoughts, anxiety and depression and balance and coordination problems. These utility values highlight the negative impact of AEs and can be used in economic evaluations.

#### PIN86

##### KNOWLEDGE, ATTITUDE AND PERCEPTION OF POLIO (POLIOMYELITIS) AMONG GENERAL PUBLIC IN PAKISTAN

Iqbal MS<sup>1</sup>, Iqbal MW<sup>2</sup>, Iqbal MZ<sup>3</sup>, Bahari MB<sup>3</sup>

<sup>1</sup>Faculty of Pharmacy, Bahauddin Zakariya University, Multan, Pakistan. <sup>2</sup>Department of Clinical Pharmacy, Faculty of Pharmacy, MAHSA University, Selangor, Malaysia, <sup>3</sup>Faculty of Law, Universiti Malaya, Kuala Lumpur, Malaysia, <sup>3</sup>Department of Clinical Pharmacy & Pharmacy Practice, Faculty of Pharmacy, AIMST University, Kedah, Malaysia

**OBJECTIVES:** To assess knowledge, attitude and perception of Polio (Poliomyelitis) among general public in Pakistan and to recommend suitable measures in order to improve the awareness of this perilous disease. **METHODS:** A cross-sectional study was conducted on a newly developed, validated and structured self-administered research tool and data was collected by interviews. Face and content validity of the research tool was done by various healthcare individuals including academics, physicians, pharmacists and senior nurses. The research tool was also piloted on 15 healthcare providers in a different hospital before start of the study. A p-value < 0.05 was considered statistically significant. **RESULTS:** The findings of the study revealed that out of 1250 participants, 87.5% were males while 12.5% were females. 11.2% of the participants believed that vaccination was prohibited in religion, 85.4% participants were aware of Polio disease, and 84.5% believed that disease could be prevented by giving vaccines to children. 82.3% participants gave vaccine to their children whereas 55.2% knew the schedule of the vaccine for their children. This study also found that 88.8% of the participants wanted to eradicate disease from Pakistan. **CONCLUSIONS:** The results of the study revealed that people have adequate knowledge about Poliomyelitis and wanted to eradicate it from Pakistan by participating in vaccination activities but still there are few who believe that Polio vaccine cannot prevent the disease.

#### PIN87

##### EFFECT OF PHARMACIST INTERVENTIONS AND PATIENT REPORTED OUTCOMES ON HIGHLY ACTIVE ANTIRETROVIRAL THERAPY COUNSELING IN INDIAN HIV POSITIVE PATIENTS : A PROSPECTIVE STUDY

Rajesh R<sup>1</sup>, Ansar H<sup>2</sup>, Sudha VS<sup>3</sup>, Varma DM<sup>3</sup>

<sup>1</sup>MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES, MANIPAL UNIVERSITY, MANIPAL, India, <sup>2</sup>MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES, MANIPAL, India, <sup>3</sup>Kasturba Medical College, MANIPAL, India

**OBJECTIVES:** In India, Human immunodeficiency virus (HIV) infected patients lacks knowledge on highly active antiretroviral therapy (HAART) leading to non-adherence. The study was conducted to assess the effect of pharmacist counseling on HAART and Patient reported outcomes related to Knowledge, Attitude, Belief and Practice (KABP) behavior. **METHODS:** A prospective study was conducted with Institutional Ethics Committee Approval, at tertiary care teaching hospital, from October 2011 to June 2012. People living with HIV (PLH) were counseled by a pharmacist with validated (KABP) questionnaires and data scores of (KABP) responses were assessed at the base-line, pre and post counseling. Counseling was on safe use of HAART, significance of HAART adherence. Pearson chi-square test was used to compare baseline Pre- KABP and Post- KABP responses with follow-ups. **RESULTS:** A total 120 PLH (89 males, 31 females) were counseled. The PLH were counseled on tenofovir + emtricitabine + efavirenz followed by zidovudine + lamivudine + nevirapine therapy. At the baseline 94(78.3%) knew the mode of HIV transmission and 60(50%) were not aware about the content of HAART. After pharmacist counseling, 58.3% (p<0.001) of patients knew about the content of HAART. Knowledge score was (p<0.001) higher in the literate group (51.7%) compared to illiterate group (48.3%). Patients attitude, beliefs related to HAART, were found to be (p<0.05) and 78% (p<0.001) patients were aware that lifelong HAART therapy is needed. In comparison, from base line counseling responses of (33%) to post counseling responses of (67.5%) of PLH realized that HAART improves immunity. **CONCLUSIONS:** Pharmacist counseling removed social stigma, and increased self-efficacy beliefs to maintain adherence to HAART.

#### PIN88

##### MULTIPLE PILL REGIMENS, SINGLE TABLET REGIMENS AND HIV+ PATIENTS QUALITY OF LIFE: EVIDENCE FROM THE STRAQ STUDY

Foglia E<sup>1</sup>, Maggiolo F<sup>2</sup>, Quirino T<sup>3</sup>, Bonfanti P<sup>4</sup>, Scolari F<sup>1</sup>, Garagiola E<sup>1</sup>, Ferrario L<sup>1</sup>, Bernasconi D<sup>4</sup>, Croce D<sup>5</sup>

<sup>1</sup>LIUC University, Castellanza, Italy, <sup>2</sup>Papa Giovanni 23th Hospital Authority, Bergamo, Italy, <sup>3</sup>Ospedale di Circolo Hospital Authority, Busto Arsizio, Italy, <sup>4</sup>Alessandro Manzoni Hospital Authority, Lecco, Italy, <sup>5</sup>University of the Witwatersrand, Johannesburg, South Africa

**OBJECTIVES:** Psychological, social, wellbeing factors and adherence emerged as key issues for measuring the HIV-infected patients quality of life (QoL). In the literature, but in Italian evidences in particular, there is a lack of indication concerning i) a specific "country-oriented" QoL measure, ii) its relationship among immunological (CD4) and virological (VL) status and iii) determinants and predictors of HIV-patients QoL. The aim of the study was to examine the QoL, adherence, wellbeing, depression, CD4 and VL, in an Italian unselected cohort of patients receiving stable antiretroviral treatment. **METHODS:** A multicenter, prospective study was conducted, involving 3 Infectious Diseases centers in Lombardy Region. Two groups of patients were considered, depending on the therapeutic strategy characteristics: Multiple Pill Regimens

(MPR) and Single Tablet Regimens (STR). Validated and self-reported questionnaires (ISS-QoL, EQ-5D-3L and CES-D) were administered to collect social and clinical data, QoL measure and adherence information, both at baseline and follow-up (6 months). The correlations between i) perceived QoL and the above mentioned variables, ii) determinants and/or predictors of the QoL, were investigated. **RESULTS:** 300 questionnaires were delivered and 174 were completed. MPR and STR populations were comparable for all personal details, with similar immunological and virological effectiveness. Patients receiving STR declared a higher QoL than individuals using MPR (P=0.004). Non-adherence, depression, lack of wellbeing and higher number of comorbidities lead to worse QoL (P<0.05). The predictors of QoL in HIV-infected individuals were duration of HIV infection (P=0.00), wellbeing measures (P=0.01), years of treatment (P=0.007) and viral load (P=0.003). **CONCLUSIONS:** Although literature showed that QoL depends on CD4 count, the results of our study suggested that in the Italian setting, immunological effectiveness is not a determinant and a predictor of QoL variation. Regimen treatment impacts on adherence and compliance: simplification strategies could improve QoL patients perception.

#### PIN89

##### ASSESSMENT OF HIV-RELATED QUALITY OF LIFE IN A REPRESENTATIVE SAMPLE OF FRENCH PATIENTS USING MULTIVARIATE MULTI-BLOCK STATISTICAL MODELS

Lalanne C<sup>1</sup>, Randrianomanana M<sup>1</sup>, Carrieri PM<sup>2</sup>, Dray-Spira R<sup>3</sup>, Chassany O<sup>1</sup>, Duracinsky M<sup>1</sup>

<sup>1</sup>University Paris-Diderot, Sorbonne Paris Cité, Paris, France, <sup>2</sup>INSERM, Marseille, France, <sup>3</sup>Inserm, Paris, France

**OBJECTIVES:** To study the influence of symptom experience and clinical markers on a multidimensional Health-related quality of life (HRQL) questionnaire specific to HIV using sparse PLS regression and Canonical Correlation Analysis (RGCCA). **METHODS:** Self-reports were collected during the Vespa2 national survey, including: the 8-dimension PROQOL-HIV questionnaire, a 22-symptom checklist, and 22 binary clinical indicators. Complete cases for all three blocks of data were considered in this analysis: N=1524 patients undergoing ART, age = 47, 77% men, 51% MSM, 80% undetectable viral load. Data were analysed using bootstrapped sparse PLS (HRQL and symptoms only) and RGCCA (three blocks), with hyper-parameters (number of components,  $\kappa$ , and L1 penalty,  $\lambda$ ) optimised through 10-fold cross-validation. The HRQL block was never penalised. **RESULTS:** Sparse PLS ( $\kappa=4$ ,  $\lambda=0.65$ ) selected 15 symptoms where sexual dysfunction, lipodystrophy, depression had the highest negative loadings on relevant dimensions of the PROQOL-HIV dimensions (sexual relationships, body changes, emotional distress). Fatigue, anxiety, and sleep disorder cross-loaded on all but the body changes dimension. Using three-block RGCCA ( $\lambda=0.7$ ), the top symptoms (loadings) on the first component (44% of average variance explained) were anxiety (0.52), depression (0.51), and fatigue (0.48), while gender (-0.68), chronic HCV (0.61) and living mode (0.30) were the most important clinical predictors. Model-based cluster analysis of first component scores highlighted four equal-size clusters of patients accounting for important individual factors: chronic HCV, MSM vs. women, living alone, disease duration. **CONCLUSIONS:** Using sparse multi-block modelling of HRQL, symptom experience, and clinical markers allows to study both variables relationships and individual profiles of respondents. Accounting for the differential impact of symptoms and clinical factors on several dimensions of a specific HRQL questionnaire provides interesting perspectives in health management and treatment monitoring for HIV patients.

#### PIN90

##### PSYCHOMETRIC VALIDATION OF THE NEW INTERNATIONAL QUESTIONNAIRE TO ASSESS HEALTH-RELATED QUALITY OF LIFE (HRQL) SPECIFIC TO VIRAL HEPATITIS C: PROQOL-HCV

Duracinsky M<sup>1</sup>, Armstrong A<sup>2</sup>, Herrmann S<sup>3</sup>, Lalanne C<sup>1</sup>, Galano E<sup>4</sup>, Da Silva MH<sup>4</sup>, Carrieri PM<sup>5</sup>, Chassany O<sup>1</sup>

<sup>1</sup>University Paris-Diderot, Sorbonne Paris Cité, Paris, France, <sup>2</sup>Australian Institute of Family Studies, Melbourne, Australia, <sup>3</sup>Murdoch University, Murdoch, Australia, <sup>4</sup>Centro de Referência e Treinamento DST/Aids, Sao Paulo, Brazil, <sup>5</sup>INSERM, Marseille, France

**OBJECTIVES:** To validate a new international questionnaire to assess Health-Related Quality of Life (HRQL) in patients living with HCV. Existing tools used in HCV were mostly generic and missing important concepts such as impact of the treatment. **METHODS:** 660 HCV mono-infected or HIV co-infected patients included in a cross-sectional survey in 3 countries (France [59%], Brazil [30%], and Australia [11%]) completed paper- or internet-based version of 3 HRQL questionnaires and symptom, sociodemographic and biomedical checklist. Psychometric item analysis and factor analysis were used to reduce the original 72-item PROQOL-HVC questionnaire. Reliability (Cronbach's alpha), convergent validity (EQ-5D, SF-12, symptoms), and clinical validity (biological markers) were assessed on the final version using correlation and two-group comparison at a fixed 5% level. **RESULTS:** Sample characteristics: 57% men, 52 years, 80% vocational level and higher, 35% living alone. Regarding comorbidities and treatment status: 35% co-infected with VIH (95% under ART), 15% not treated, 25% undergoing interferon, 35% ribavirin, 43% Direct-Acting Antivirals (35% without associated interferon); 27% depressive (71% treated). The PROQOL-HCV questionnaire was reduced to 38 items spanning 7 dimensions scored on a 100-point scale: Physical Health (PH, 6 items,  $\alpha=0.90$ ), Emotional Health (EH, 9 items,  $\alpha=0.93$ ), Future Uncertainty (FU, 6 items,  $\alpha=0.79$ ), Intimate Relationships (IR, 3 items,  $\alpha=0.86$ ), Social Health (SH, 3 items,  $\alpha=0.47$ ), Cognitive Functioning (CF, 3 items,  $\alpha=0.80$ ), and Treatment Impact (TI, 8 items,  $\alpha=0.61$ ). Pearson correlations of PROQOL-HCV dimension with the EQ5-D (general health) and SF-12 mental and physical composites were in the acceptable range. The PH dimension was negatively correlated to the number of bothersome symptoms (p<0.001). Lower HRQL (PH, EH, CF) was reported in women (p<0.01), depressive patients (p<0.001), patients under interferon (p<0.01, except CF), patients without treatment (p<0.01). **CONCLUSIONS:** PROQOL-HCV questionnaire is valid and contains new dimensions such as Intimate Relationship, Social Health and Treatment impact.